

SCHOLASTIC COACH



ARMY

GOLF



"GOLFE" originated in Scotland late in the 15th Century and was promptly banned as a menace to the practice of archery. The royal ban was lifted when King James was caught playing the game he had barred. Early balls were made of feathers tightly stuffed into leather covers. The first tournament was held in 1860 at Prestwick, Scotland.



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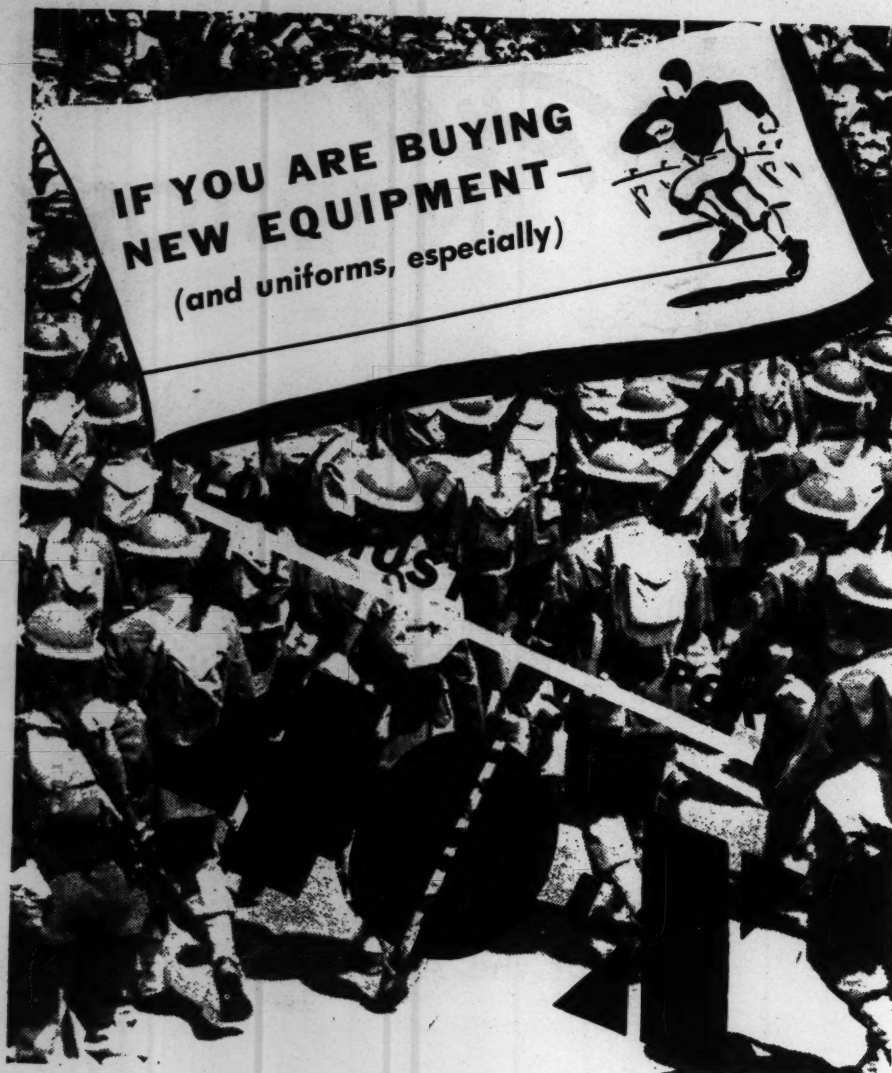
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★★★★★★

(WHAT IS 40-X? 40-X is 1942, the year of our Victory, the time that must be made as short as possible through everyone's United Effort)

SCHOLASTIC COACH

Reg. U. S. Pat. Off.

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Here Below

WHAT YOUR BOYS SHOULD KNOW ABOUT THE ARMY'S FREE COLLEGE TRAINING PROGRAM

TO THE nation's high school youth who are wondering how they can best prepare themselves for useful roles, the new Army Specialized Training Program is of swiftly growing interest.

This program aims to provide an accelerated flow of technicians and specialists needed by the Army—men who can be developed more speedily and more efficiently in the colleges than in any camp or other establishment under Army control.

The program functions as follows: Soldiers, selected from the Army at large on a broad, democratic basis, will be sent to colleges and universities for certain specialized training needed for the various arms and services. Selection of soldiers will be based on their aptitudes, capabilities and experiences as shown in various screening devices. Soldiers taking academic training will remain soldiers on active duty, in uniform, under military discipline with regular Army pay and at no cost to themselves for college training.

Colleges and universities which are found to have adequate facilities for the particular fields of instruction included in the program will be approved for contracts. Some soldiers will enter college at the freshman level, others at the advanced level. Soldiers over 22 years of age can qualify only for the advanced level, while those under 22 can qualify for the basic or advanced phase, depending on their aptitudes and educational background.

Qualified soldiers who have completed their basic military training will be routed to educational institutions for one or more twelve-week terms of prescribed instruction. At the end of each twelve-week term, a trainee may be recommended for continuation of his formal training. He may be assigned to other military duty or may be recommended for Officers' Candidate School.

Young men in high school, especially members of the junior and senior classes, undoubtedly will want to know how to adjust their courses so as to improve their chances for qualifying for college training as a soldier. Numerous questions are being asked. Following are some typical ones and their answers:

What sort of secondary school background would best qualify a soldier for Army training at colleges?

A soldier aspiring to college training under the Army Specialized Training Program ought to have a sound all-round scholastic record, with a solid basis of chemical and physical sciences and mathematics as well as English, a foreign language and American history.

How will a soldier's eligibility for such training be determined?

Any soldier is eligible for admission. His chances for acceptance will depend on his educational background, his capabilities, and his will to work. He is assumed to be up to the Army's physical standard since he will have passed the routine Army medical examination given at induction centers.

It will be necessary for him to receive a score of 110 or better in the General Army Classification Test at reception centers. He must receive an acceptable score in an Army Specialized Training Division test administered after he has received nine of his 13 weeks of basic military training. And he must meet the same character standard prescribed in Army regulations for admission to Officers' Candidate School.

No soldier who has been convicted of a felony can be accepted. No soldier who has been convicted of a military offense of a less serious na-

ture will be accepted unless his services have been exemplary since his convictions.

Two other testing devices are used. Achievement tests are administered in the tenth week of each twelve-week term in the training program. An estimate of leadership qualities will be recorded, with civilian instructors contributing to such ratings information at the colleges.

What role will physical education have in the college training program?

During the Specialized Training courses at college, six hours weekly will be devoted to physical instruction. Five hours weekly will be devoted to military instruction.

Will trainees be permitted to participate in intercollegiate athletics?

Because of the heavy work-load carried by trainees in college, no room is left for participation in intercollegiate athletics. The work-day will begin with reveille at 6:30 A.M. and will end with taps at 10:30 P.M. The trainee will have at least one hour of free time daily. Saturday afternoons, after 3:30, will be devoted to intramural sport contests. Sundays will be free until supper formation.

Besides six hours of physical instruction and five hours of military, the work-week includes 24 hours of classroom work, including laboratory, and 24 hours of supervised study. Such a schedule, fully comparable to what is required of a soldier in camp, prevents participation in intercollegiate sports. However, participation in intramural sports will be encouraged.

Will college civilian personnel assume responsibility for instruction?

Except for strictly military instruction and the supervision of physical training, the civilian personnel will be charged with responsibility for all the teaching required.

Will soldiers who qualify for the program be allowed to choose the college at which they will study?

A qualified soldier may state a preference for a particular college with which the Army has negotiated a contract. There is no assurance, however, that the wish will be granted, since assignment will depend on a number of factors such as the Army's personnel requirements in relation to the institutions which are equipped and staffed to carry out the Program. Some col-

(Concluded on page 23)



Headed for Victory

A natural athlete, Joe here has come a long way under you, Coach. He's smoothed out his stride . . . his breathing's controlled . . . he's a strong finisher. Ordinarily Joe could look forward to a brilliant future in college track.

But this is a war year

That changes the picture for Joe and his teammates. Next year, some perhaps will be tossing "flak" at a swarm of Zeros . . . or roaring across burning sands in a tank. Others may be moving forward on a new front.

Wherever they are, they'll be better men because

of your capable guidance. You helped build them into splendid physical trim. And that ability to act fast and smart under pressure which you taught them in competitive sport will go far towards securing final victory and their early return home.

Soon other young fellows on their way up will be looking to you for training and friendly advice. They're going to need the same fine instruction you gave Joe and his buddies. We know you'll give them all you've got. And now as always, you can count on Bike to provide them and you with dependable protective equipment—the best we can make under wartime conditions.



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THE ARMY'S PHYSICAL CONDITIONING PROGRAM

By Theodore P. Bank, Colonel A.U.S.

Colonel Theodore P. Bank, former football coach and athletic director at the University of Idaho, is Chief of the Athletic and Recreation Branch of the Army. In this capacity, he helped build the physical fitness program of the High School Victory Corps.

THE purpose of war-time training is to develop an adequate force to seek out, meet, and destroy the enemy. To develop this force, each individual must be converted from a peace-loving civilian to a fighting man possessing total military fitness.

Total military fitness implies technical fitness, mental and emotional fitness, and physical fitness.

Technical fitness is evidenced by tactical comprehension and a knowledge and skill in the use of arms and equipment.

Mental and emotional fitness is evidenced by habits of thinking which promote alertness with an economy of energy and rapid relaxation when opportunity is afforded to do so. It is further evidenced by a sense of mission that is shared with others, and a will to fight. Mental and emotional fitness is more commonly known as morale.

Physical fitness is evidenced by a body which can respond to stimuli in the face of fatigue and exhaustion and continue to function effectively under the physical stresses placed upon it by the routine and emergency tasks of war. For men in the

Army, physical fitness consists of:

1. *Freedom from disease*, the discovery and care of which is a function of the physical examination and the physician.

2. *Enough strength* to do easily the heaviest tasks that may be encountered in the routine and emergency day. This includes strength of the legs and abdominal area as well as that of the arms and shoulder girdle.

3. *Enough muscular endurance* to persist without undue fatigue through the most strenuous day.

4. *Enough cardio-respiratory endurance* to perform easily the most sustained exertion the soldier is likely to face.

5. *Enough speed, agility, coordination and flexibility* to handle oneself in tactical operations.

The total physical education program in the Army may be considered from two points of view, namely, the physical training program and the athletic program. Both of these contribute substantially to mental, emotional, and physical fitness. Each will be discussed in turn.

Because it is Army policy to decentralize functions where possible in order to develop initiative and self-reliance, the responsibility for physical training is placed upon local commanders. The officers all have some training in this regard

and they are provided assistance in the form of manuals and training circulars.

The manual on physical training in the Army which has been widely employed as a guide by officers was published in 1941, and is entitled FM 21-20. On November 12, 1942, Training Circular No. 87 was issued for the use of officers. The program recommended for boys in the High School Victory Corps manual entitled, *Physical Fitness Through Physical Education*, is quite similar to that found in this training circular.

The program recommended in Training Circular 87 includes the following activities:

Marching

1. March 4 miles in 45 minutes.
2. March 5 miles in 1 hour.
3. March 9 miles in 2 hours.
4. March 16 miles in 4 hours.
5. March 25 miles in 8 hours.
6. March and double time for 7 miles without a halt.

Calisthenics

Twelve exercises are recommended.* Great care was taken to select the exercises which would

(Continued on page 28)

*These exercises, as well as the others that follow, are outlined both in Training Circular 87 and in the HSVC manual, *Physical Fitness Through Physical Education*. The exercises were also given in *Scholastic Coach's* special HSVC issue last January.

GODMAN FIELD OBSTACLE COURSE

By Lt. William H. Simpson

"STAGGERING" is just a mild word to describe the Army's task of educating a peace-loving citizenry in the art of killing and in the defense against being killed.

Every man entering the Armed Forces gets basic training. A minimum of one hour a day, six days per week, of vigorous physical training activities are given the new men. These activities are designed primarily to increase the functional capacity of the heart and lungs and to develop the muscles of the abdomen.

In addition, a physical achievement test is given every thirty days. This enables the physical director to determine the fitness of his personnel throughout the entire period they are under his care.

Physical fitness and successful execution of tactical operations, both under routine and combat conditions, depend on this activity program.

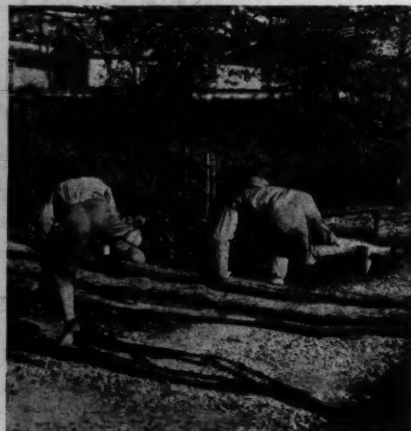
Correct form is always illustrated by man on right.



Bird's-eye view of Godman Field course.



1. Deep knee bend and leg drive will furnish impetus for vault. Body must be close to obstacle, as shown on right.



2. By not keeping his legs together, man on left stands a good chance of bruising his shin bone. Correct form (right) gives you the necessary clearance.



3. Having cleared the barrier with the correct method, man on the right is instantly ready to continue to the next obstacle. His partner is all tied up.



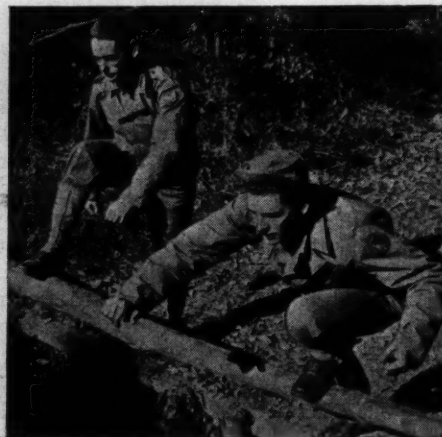
4. The rope must be gripped near the bottom to increase pendulum action, as shown on right. Other grip causes too much of an arch.



5. By extending grip to utmost, man on left is virtually suspended in midair by time he reaches the opposite side.



6. Deep knee bend and close position to obstacle is again necessary. Method of man on left may be correct for boarding a train, but not for this obstacle.

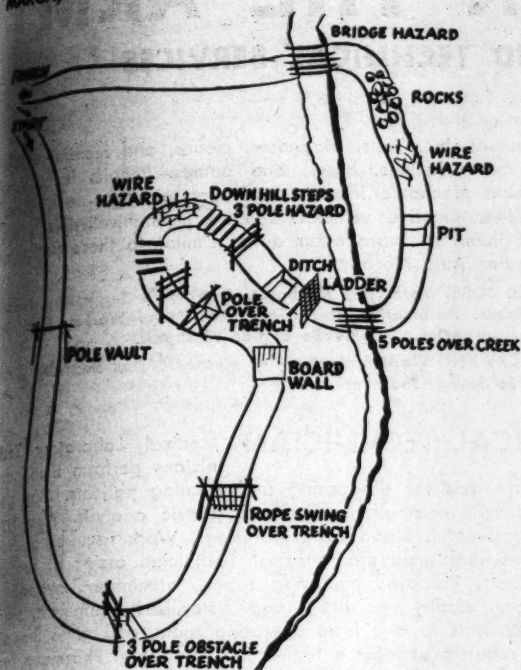


7. Man on right will reach top okay; his body is bent forward and knees flexed. Other fellow is off balance; and were he carrying full field equipment, would have to stop for rest.



8. Up and over in a flash, leg acting as driving force. Man on left will be lucky if he doesn't finish in the ditch.

13. So final given body ward.



Detailed layout of obstacle course.

The superior physical condition of the personnel at Godman Field, Fort Knox, Ky., is due to such a program—a program which utilizes to a great extent that cure-all muscle builder, the obstacle course.

It was found that most men had good legs but that the little wheels inside, which make them function, were badly out of condition. So the obstacle course was installed as a remedy.

It must not be forgotten, however, that improper use of the obstacle course may wreak irreparable damage. To get the most out of this conditioning medium, the boys must be taught correct techniques.

The accompanying pictures illustrate the correct and the incorrect methods of clearing various obstacles. While only the Godman Field course is covered here, the obstacles are more or less standard impedimenta.

In each of these pictures, the wrong method is illustrated by the man on the left and the correct technique by the man on the right.

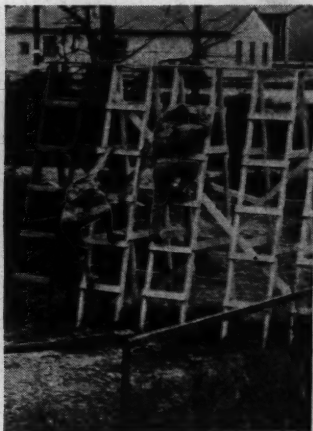
A good slogan to adopt is: "Energy is precious and easily expendable; doing things the right way conserves it."



9. Once again, the deep knee bend and leg drive are required for good clearance.



10. Do-it-the-hard-way Jones on left forgot about knee bend and drive; consequently, he'd better get a ladder.



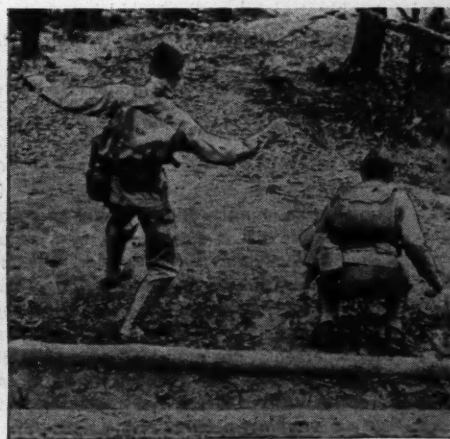
11. Here (on left) again is that man boarding a train, expending much energy and no gray matter.



12. With a side stroke, as in swimming, man on right will get through easily; he pulls with arm and drives with legs. Problem pupil is going to lose a pack.



13. Same as No. 8, with final leg drive being given by rear leg and body well balanced forward.



14. Shock of landing is cushioned by flexed legs, and equilibrium is maintained by bending body forward. Man on left looks as though he's taking a backslide.



15. On catwalk like this, confidence is necessary, plus use of arms for balance. Gaze must always be kept on the spot that will be treaded.



16. Good exercise to develop balance and agility. Rocks may be moved occasionally to prevent men from memorizing this part of course.

OPPORTUNITIES IN THE ARMY

AN OUTLINE OF THE GENERAL AND TECHNICAL SERVICES

RADIO OPERATOR Operators in Air Forces receive and send messages by code or by voice, using standard and special radio equipment. Maintain communications between ground and air or between one point and another. Under certain conditions, be responsible for maintenance and repair of equipment. Operators in Ground Forces classified as Low-Speed, High-Speed, or Fixed-Station Radio Operators. Low-Speed sends and receives code messages at minimum rate of 13 standard words per minute. Uses a hand key for transmitting messages and prints all messages received. Responsible for minor adjustments to equipment and must be able to operate radiotelephone voice-radio equipment, using phonetic alphabet and other prescribed procedures. High-Speed must be able to send and receive code messages at minimum rate of 25 standard words per minute. Maintains communications with other ground stations, with airplanes in flight, or with military vehicles. Fixed-Station must be able to send and receive tactical routine messages from or at a fixed station in clear text or in code. Uses "speed" key for transmitting and typewriter for receiving.

RELATED CIVIL JOBS: Radio Operator. Telegraph Operator. Radio Repairman. Radio Technician (Engineer). Railway Dispatcher. Electrical Engineer (Technician). Licensed Radio Operator.

PRACTICAL KNOWLEDGE: Typing. Radio. English. Electricity. International Code.

ELECTRICIAN Install, repair, and test electrical equipment, apparatus, and wiring connected with communication and power systems of Army buildings or other structures. Splice and insulate wire, test circuits and make repairs, and install conduit. Electric Motor Repairman performs similar duties in connection with electric motors and equipment, including armatures, field coils, commutators, starting devices, and switches. Automotive Electrician repairs and installs ignition systems, starters, panel instruments, parts of wiring systems, distributors, and generators.

RELATED CIVIL JOBS: Automotive Electrician. Electrician. Electrical Instrument or Motor Repairman. Airplane Electrician. Searchlight Operator.

PRACTICAL KNOWLEDGE: Electricity. Electrical system of automobile. Wire splicing.

CLERICAL WORKER General Clerk performs general office and clerical work in a military office. Compiles and files reports and keeps records. May be called upon to operate various office machines, such as mimeograph, multigraph, and adding machines. Should be able to type and should be familiar with Dewey decimal system. Clerk-Typist performs clerical work requiring reasonable efficiency in typing. Types military letters and reports and is responsible for filing materials. Should know Army administrative office procedures and forms for military correspondence. Receiving or Shipping Checker checks supplies, materials, and equipment in and out of warehouses and storerooms. Assists in taking inventories and keeps simple stock records.

RELATED CIVIL JOBS: Mail Clerk. Shipping Clerk. Typist. Stock Clerk. File Clerk. Clerk-Typist. Stenographer.

PRACTICAL KNOWLEDGE: Typing. Filing. Bookkeeping. Secretarial practice. English usage. Army clerical procedures. Operation of mimeograph and other office machines.

AUTO MECHANIC Repair and maintain motor vehicles, such as scout cars, command cars, trucks, etc. Check for mechanical defects in brakes, wheel alignment, electrical connections, lubrication, etc. Make minor repairs and replace defective parts. Perform lubricating operations. Assist Motor Transportation non-commissioned officers in diagnosing and correcting engine and other operating faults. Know Army inspection and repair procedures. Auto Body Repairman repairs damages to bodies and fenders of automotive vehicles. Removes dents with ding hammer and block. Solders, sands, and paints damaged parts, using spray gun or brushes for painting. Welds breaks in fenders. Auto Radiator Man cleans and repairs automotive vehicle cooling systems, including radiators, pumps, etc. Tests, diagnoses, cleans, and repairs radiator cores, motor jackets, hoses, and pumps. Repairs leaks. Auto Equipment Mechanic inspects and maintains gas- and Diesel-engined automotive vehicles. Locates mechanical defects and repairs them; performs other duties similar to those performed by regular Auto Mechanic.

RELATED JOBS: Motorcycle Mechanic. Automobile Serviceman. Tractor Mechanic. Automotive Electrician. Sheet-Metal Worker. Machinist. Motor Inspector. Automobile Engine Mechanic.

PRACTICAL KNOWLEDGE: Automotive mechanics and electricity. Welding. Soldering. Shopwork.

MEDICAL TECHNICIAN Medical Laboratory Technicians perform blood and urine analysis for diagnosing and treating patients. May perform basal metabolism tests and gastric analysis. Also type and cross-match blood for transfusions. Work requires at least a high-school graduate. Surgical Technician assists at surgical operations. Prepares operating rooms, administers hypodermic injections, cleans operating rooms, sterilizes equipment, transports patients to and from operating room, and gives first aid. Work requires at least a high-school graduate. Pharmacy Technician compounds medicines as directed. Takes charge of pharmaceutical equipment and stocks. Work requires graduate of Army course in pharmacy or individual who has been certified as competent by an Army medical officer. Medical Technician acts as male nurse, cooperating with surgeons. Also gives emergency medical treatment, compounds and administers medicines, cleans and bandages wounds, and gives injections. May be called upon to demonstrate and lecture on anatomy, first aid, physiology, and hygiene. Work requires graduate of Army Medical School or individual with equivalent training.

RELATED CIVIL JOBS: Medical Student. Male Nurse. Chemist. Chemical or Medical Laboratory Technician. Pharmacist. Physics Laboratory Assistant. Pharmacy or Dentistry Student. First Aid Man. Physician. Veterinarian. Hospital Orderly. Dental Technician.

PRACTICAL KNOWLEDGE: First aid. Anatomy. Physiology. Hygiene. Medicine. Pharmacy. Veterinary science.

RADIO REPAIRMAN Inspect, install, test, and repair radio transmitting and receiving instruments and other equipment used in Army communications. Use testing meters and other testing devices. Isolate defects and repair them. Resolder loose connections. Radio Repairman, Fixed Station, maintains fixed radio broadcasting and receiving stations in proper operating condition. Tests circuits, tubes, and other parts. Detects defects and makes repairs or replacements. Makes adjustments to improve reception and transmission. Uses high-frequency direction finders to test and repair radio equipment. Radio Repairman, Fixed Station, must be thoroughly trained radio technician.

RELATED CIVIL JOBS: Radio Operator. Radio Engineer (Technician). Electrical Engineer or Student.

PRACTICAL KNOWLEDGE: Radio. Electricity. Meters. Use of small repair tools.

MOTORCYCLE WORKER Operate Army motorcycles (with or without side car) and make minor repairs when necessary. Do patrol work, control traffic, act as messengers, and engage in reconnaissance and combat activities. Drive under adverse conditions and in unfamiliar territory; reconnoiter and orient selves in strange terrain by use of maps, compass, and landmarks, and report back to headquarters. Motorcycle Mechanics repair, service, and make replacements on motor, frame, electrical system, wheels, and other parts of Army motorcycles. Motorcycle Inspectors test equipment and determine repairs necessary to keep machines in good working order.

RELATED JOBS: Automotive Electrician or Mechanic. Motorcycle Mechanic. Chauffeur. Truck Driver. Motor Inspector. Foreman of Auto Repair Shop.

PRACTICAL KNOWLEDGE: Driving. Automotive mechanics, electricity, repair. Map reading. Traffic regulations. Good memory for landmarks.

TELEPHONE OPERATOR Operates a switchboard in camp, post, or station headquarters. Must be familiar with telephone communication network. Acts as receptionist, takes messages, keeps records, and acts as clerk. Field Telephone Operator connects and operates a local battery field telephone. Duties similar to those of regular telephone operator, but is also responsible for testing equipment, seeing that necessary repairs are made, and assisting in laying of short, local lines.

RELATED CIVIL JOBS: Switchboard Operator. General Clerk. Telephone and Telegraph Lineman or Installer-repairman.

PRACTICAL KNOWLEDGE: Clerical procedures. Electricity. Wire works. Telephone.

RIFLEMAN, GUNNER Antiaircraft Machine Gunner loads, aims, and fires from car, tank, or from ground, primarily to destroy enemy aircraft. Assists in carrying and setting up gun, estimates range and setting sights, and replaces defective parts. May be called upon to drive scout car or tank, operate radio, or fire 37 mm. antitank gun. Rifleman loads, aims, and fires to destroy enemy personnel and to assist in advancing against enemy position. Must be trained in bayonet and grenade and must be proficient marksman. Cannoneer performs various duties as member of highly trained and coordinated team in serving ammunition to and firing a gun or howitzer. Does maintenance work on gun and may assist in aiming. Gunner operates controls of antiaircraft, antitank, or other type of gun or howitzer. Corrects range, computes correction data, fires piece, and assists in directing placement and removal of gun from firing position.

RELATED CIVIL JOBS: Machine Operator. Machinist's Helper. Hunting and Fishing Guide. Trapper. Utility Repairman.

PRACTICAL KNOWLEDGE: Driving. Gunnery. Mechanics. Mathematics for range finding.

POWER WORKER Portable Power Generator Operator operates portable gasoline engine which drives small electric generator. Starts motor, regulates speed, checks gages, and sees that equipment is functioning properly. Responsible for servicing motor, making minor repairs, and keeping operations log. Generator Repairman maintains and repairs equipment. Removes carbon from valves and cylinder heads, cleans and adjusts carburetors, and replaces bearings, fan belts, and other parts of gasoline engine that may be defective. Also diagnoses and repairs defects in generator parts, including wiring system and commutators.

RELATED CIVIL JOBS: Powerhouse Engineer. Operating Engineman. Electric Motor Repairman. Electrician.

PRACTICAL KNOWLEDGE: Electricity. Automotive mechanics. Wiring and splicing.

CARPENTER, UTILITY REPAIRMAN Carpenters may construct and maintain wooden barracks, sheds, furniture, and other equipment, or build and repair small boats, barges, and pontoons. Construction Carpenter builds frames, nails on roofing, lays floors, and erects partitions, scaffoldings, and concrete forms. Must be sufficiently skilled to make chairs, tables, bins, and shelves. Utility Repairman performs variety of tasks related to general repair and maintenance of machines, mechanical equipment, and other physical structures of military establishment. Does rough wood work, simple plumbing, electric wiring, and mechanical repair work. Duties involve use of simple tools of several trades.

RELATED CIVIL JOBS: Cabinetmaker. Painter. Packing Case Maker. Shop Maintenance Mechanic. Student of Manual Arts for Mechanics. Bridge Builder. Woodworking-Machine Operator. Mine Timberman.

PRACTICAL KNOWLEDGE: Woodworking. Metalwork. Wiring and Splicing. Common essential tools. Electricity. Principles of machines. Measuring and gaging.

MESSENGER Transmits oral and written messages. Travels along prescribed routes, using maps and compass to orient himself. Selects routes which provide best concealment and destroys messages when in danger of capture. Mounted Messenger performs duties on horseback. Cares for mount and must be capable horseman. Messenger Dispatcher directs personnel of messenger service located at message center. Secures information about routes and troop movements in area and revises messenger routes in accordance with this information. Instructs messengers and keeps records of dispatch and delivery of all messages.

RELATED JOBS: Motorcycle Scout. Mail Clerk.

PRACTICAL KNOWLEDGE: Driving. Horsemanship. Map reading. Ability to convey messages clearly and accurately. Resourcefulness.

MILITARY POLICEMAN Assists in enforcing military laws and regulations, in maintaining order, and in controlling traffic. Also assists civilian police in enforcing compliance of military personnel with civilian regulations, in preventing and investigating crimes, and in accepting custody of enlisted men who have been arrested by civilian police for minor violations. May guard prisoners of war.

RELATED CIVIL JOBS: Policeman. Investigator. Vice-Squad. Lawyer. Athletic Instructor. Fireman.

PRACTICAL KNOWLEDGE: Traffic regulations. Civil and military law. Use of pistols, riot guns, and submachine guns.

RADAR WORKER Radar Operator performs various duties as member of team which operates a designated radar set. Sets up equipment and operates it in accordance with prescribed procedures. Must be able to perform duties of other members of team and may be called upon to assist in disassembling equipment and preparing it for transportation. Other duties include plotting and reading polar coordinates and converting them to rectangular coordinates. Radar Repairman directs installations and maintenance of designated radar sets. Performs difficult repair work and directs performance of routine repairs. Responsible for testing, adjusting, tuning and maintaining radar equipment. Radar Technician selects suitable sites and serves as technical supervisor for radar installations. Assists in repair of radar equipment and may be called up to perform duties of radar operator.

RELATED CIVIL JOBS: Radio Repairman or Engineer (Technician). Electrician. Electrical Engineer. Physicist.

PRACTICAL KNOWLEDGE: Principles of detection with radar equipment. Excellent vision. Aircraft tactics. Electricity. Radio.

LINEMAN AND RIGGER Rigger erects radio antennas and flagpoles; adjusts tackle, moves heavy military equipment; uses derricks, cranes, A-frames, cableways, hoisting engines, and other rigging equipment; sets up, braces, and rips hoisting equipment; splices rope and steel cable; does all kinds of rope and wire work and light tackle work. Lineman erects and maintains equipment used in military wire communication and power line systems. Telephone and Telegraph Lineman erects and maintains telephone and telegraph poles, lines, cables, and auxiliary equipment. Strings wire, attaches cross arms and other equipment to poles, and makes operating tests. Power Lineman erects poles, cables, transformers, and auxiliary power-line equipment.

RELATED CIVIL JOBS: Electrician. Railway Signal Mechanic. Cable Splicer or Tester. Telephone and Telegraph Groundman, Repeater-man, Wire Chief, Inspector, Installer-Repairman or Switchboard Installer. Hoist Operator. Crane Operator.

PRACTICAL KNOWLEDGE: Electricity. Rope work. Wire work. Splicing. Rigging and tackle work. Telephones.

FIRE CONTROL OPERATOR Sets up, operates, and maintains one or more fire control instruments, such as Aiming Circle, Stereoscopic Range Finder, and Telescope. Assists in establishing and moving observation posts, and cares for fire control instruments. May do simple surveying in setting up gun positions.

RELATED CIVIL JOBS: Surveying Rodman and Chainman. Surveyor. Surveying Instrument Man. Topographic Surveyor.

PRACTICAL KNOWLEDGE: Surveying. Trigonometry and solid geometry.

TRUCK DRIVER Operators of Army trucks with capacity greater than three tons are Heavy Truck Drivers; those who operate trucks with capacity less than three tons are Light Truck Drivers. Required to make minor adjustments and necessary road repairs, to keep trucks greased and supplied with gasoline and oil, and to charge batteries. Should know civilian and military traffic regulations and must hold Army motor vehicle operator's permit.

RELATED CIVIL JOBS: Chauffeur. Ambulance Driver. Automobile Mechanic. Truck Driver.

PRACTICAL KNOWLEDGE: Driving. Auto mechanics. Electricity of storage battery.

AMMUNITION HANDLER Handles, cleans, transports, stores, and issues ammunition. Works at ammunition dump, helps load and unload trucks, or passes ammunition from magazine to rear of gun emplacement.

RELATED CIVIL JOBS: Blaster or Powderman. Packer of High Explosives. Receiving or Shipping Checker. Munitions Worker.

PRACTICAL KNOWLEDGE: Methods of storing or handling high explosives.

DUAL TRAMPOLINING for CONDITIONING

By Lt. H. Price and Ens. N. Loken

BEFORE attempting doubles stunts on the trampoline, the performers should have a thorough command of the elementary singles stunts. These were shown and described in last month's *Scholastic Coach*.

It is also necessary for the partners to work together as frequently as possible and to supplement their trampoline work with doubles balancing.

Great doubles possibilities are afforded by the trampoline. These include double bouncing of all kinds, simultaneous somersaults and turns, and a variety of mounts and dismounts. Comedy can also be effectively attempted by combines of two or three performers.

Considerable practice on timing is necessary. The tendency of bouncing toward each other can only be eliminated by practice. When new partners pair up, both must relearn their timing.

1-3 *Bounce to High Hand to Hand:* Bottom man bends knees instead of bouncing with top man and keeps arms straight; top man keeps shoulder forward and head up.

4-5 *Back Flip, Bounce Backwards to Shoulders:* Top man bounces up, feet apart; bottom man walks under partner's feet and grasps back of calves, keeping his eyes on him all the time; top man leans slightly forward, not back.

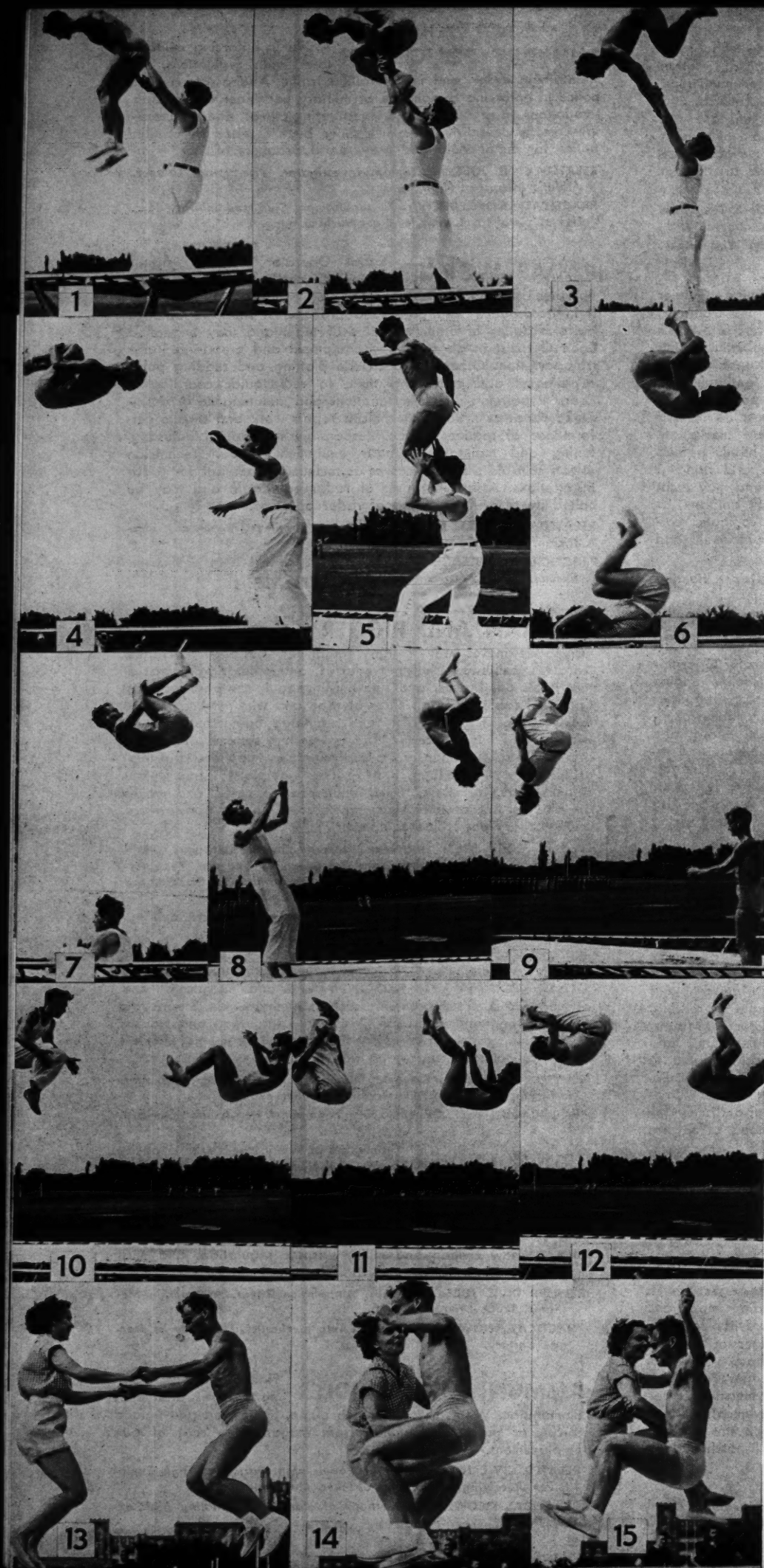
6-7 *Front Flip over Forward Roll:* Practice jumping over a forward roller; lean slightly forward before going into front flip; same applies for roller.

8-9 *Alternating Back Flips:* Be sure one man is in air while other is on canvas; lift straight up; stress height.

10-12 *Front Flips Together:* Lift straight up; bounce exactly together; tight tuck; spot your somersault.

13-15 *Doubles Bouncing—Landing on Knees:* Bounce together; hook arms and bounce to seats; don't bounce too high.

(Concluded on page 14)





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The new Keds Bulletin stresses the need for every boy to keep fit! It explains and illustrates *tumbling*, as taught to paratroopers...*hand-to-hand fighting*, simple jiu-jitsu and wrestling techniques, practiced by scouts and rangers...*rope climbing*, as perfected by the Navy in pre-flight schools. It teaches the fundamentals of broad jumping, sprint and distance running, military track and strength building.

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check-up chart enables students to keep a record of their own progress in comparison to the requirements set up by the Armed Forces.

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FRANK LEAHY, Director,
Keds Sports Department
1230 Sixth Avenue, New York City

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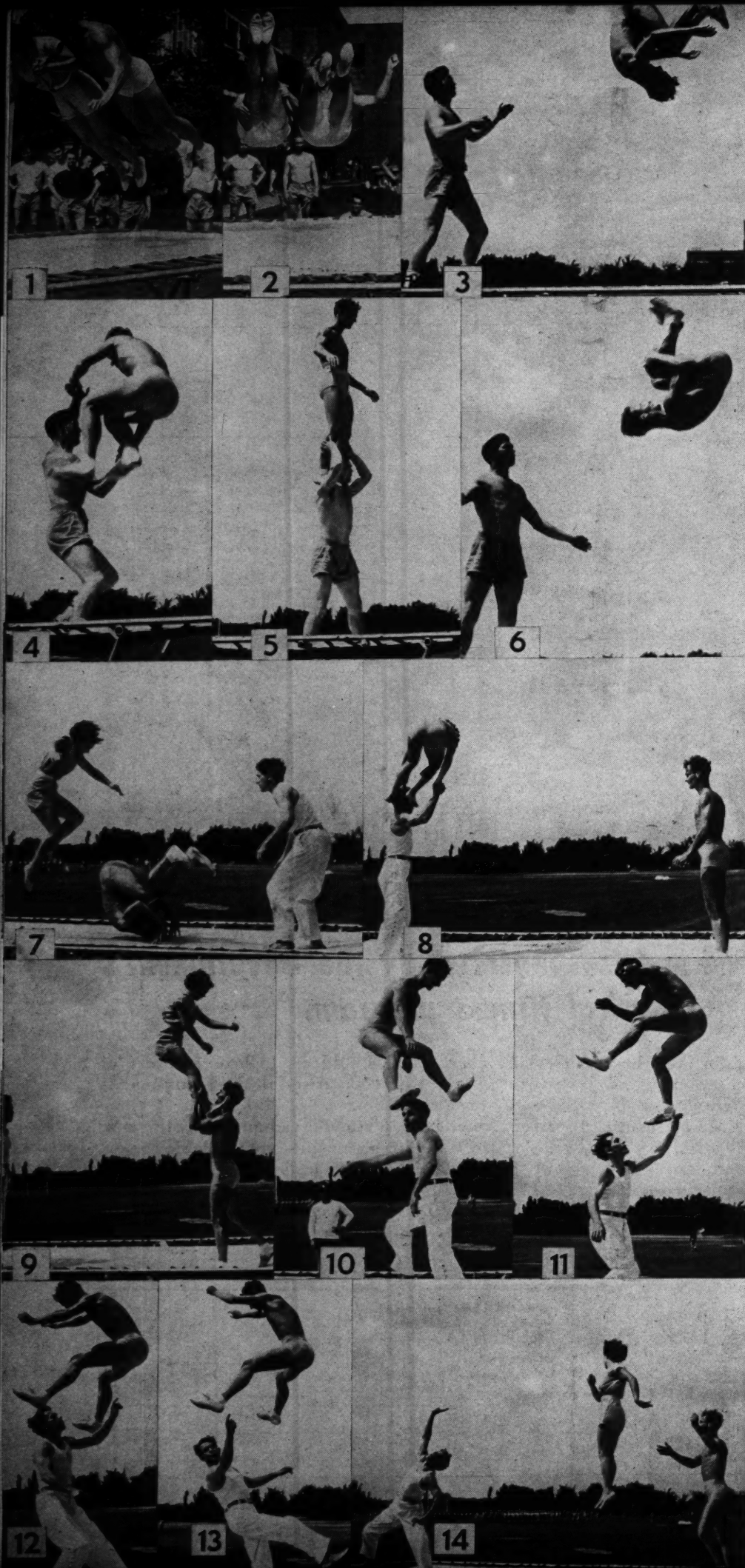
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1 Bounce to Belly: Bounce together; interlock inside hands and arms; don't bounce too high.

2 Bounce to Back: Interlock inside hands and arms; don't bounce too high; keep together.

3-5 Front Flip Bounce to Shoulder Stand: On flip, bottom man bends knees when top man lifts for front; after flip, bottom man reaches out for partner's hands; top man takes full bounce up to shoulder; bottom man keeps rear arm tense so he may support part of partner's weight.

6 Shoulder Stand, Jump to Canvas, Bounce into Front Flip: Top man jumps up and out and lands at least four feet from partner; latter bends knees slightly so as not to kill top man's bounce; bouncer lifts straight up for front flip.

7 Triple Rolls: Immediately after jumping over forward roller, kill spring and go directly into a low front roll; keep legs apart when jumping over.

8-9 Triples, Shoulder Stand to Shoulder Stand: Lift up and out when jumping from shoulders; bounce in center of canvas; top man bends at waist slightly and lifts straight up; bottom man walks under top man's feet, keeps head up, and grasps rear of top man's calves.

10-13 Comedy Doubles: Run under, top man straddles over, after three trips the bottom man drops to his back while top man straddles him to canvas; bottom man should wait until top man bounces before starting to run under; when dropping to canvas, walk to center than rock back on heels and drop; be sure to lean back.

14 Comedy Triples: One man (in white) stands at one end of trampoline, with one arm extended as if to catch girl; man and girl at other end may do a shoulder stand; she jumps to canvas, bounces to a full pirouette and then grasps bottom man's hands behind her and bounces to another shoulder stand; all this time the man in white fakes elaborate preparations for the big trick—which never materializes.

Before taking over the directorship of the gymnastics and tumbling program at the U. S. Navy Pre-Flight School at Iowa City, Lieutenant Hartley D. Price was gym coach at the University of Illinois. His collaborator, Ensign Newton C. Loken, a member of his staff at Iowa, was 1942 national collegiate all-around champion.

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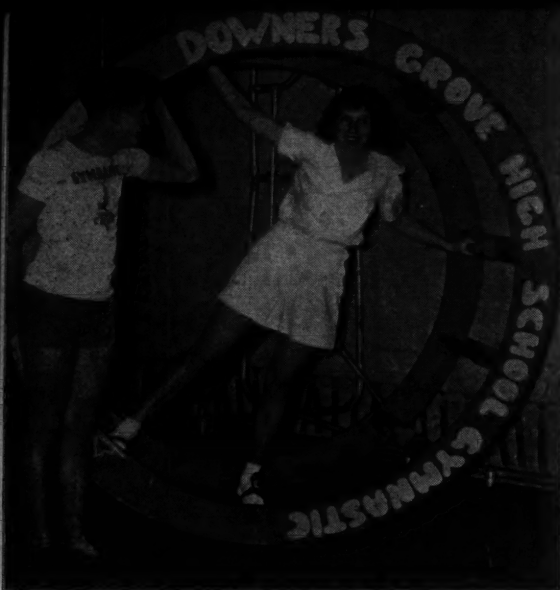
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This is the first of a series of two articles on teaching gymnastics with home-made aids, by O. R. Barkdoll, athletic director of Downers Grove, Ill., Community High School.

MANY physical education instructors have difficulty arousing interest in tumbling and gymnastics. They are difficult to teach, progress is slow, and their appeal, at first, is negligible.

Yet few forms of exercise offer so much in the way of physical development. The ability to maintain body balance in the air is a prerequisite for a good blocker in football, a shifty cutter in basketball, and a skillful pilot in the air force.

It is the "soft" boy who usually dislikes gymnastics. Practice, to him, is a form of torture. Even with the hard-muscled boys, before there is some achievement, practice is drudgery.

With a few inexpensive pieces of apparatus, however, it is possible to eliminate practically all the disagreeable features of gymnastics, accelerate progress and, in general, make practice fun. This equipment will be described as we go along.

Forward roll

The forward roll is basic in all forms of tumbling. A boy must learn to fall before he should be allowed to attempt any exercise. Easy as the forward roll is, the fat and the gangling boys have difficulty learning it.

A circus trampoline is the ideal apparatus for these boys. A professional trampoline may be purchased for \$165. But you can make one yourself for a few dollars by cross-weaving strips of inner tubes on a wooden frame eight by four feet.

In his first attempts, the boy will

Downers Grove students who posed for these pictures include: Ed Naramore, Jim O'Halloran, Leonard Groat, Don Vorreyer, Olga Arseny.

AIDS FOR THE BEGINNING TUMBLER

By O. R. Barkdoll

usually complain of bumping his head. This is easy to correct, if one thing is impressed on him: "Never touch the mat with the top of your head. Always touch the mat with the back of your head."

Dizziness is another early complaint. But this, too, is easy to rectify. By crossing the feet into the about-face position during the roll, coming to a standing position, doing an about face, and going into a backward roll, the boy may acquire skill and eliminate dizziness at the same time. The wind-up in the forward roll is compensated for by the unwinding in the backward roll.

A good practice surface for beginners may be built from old auto cushions. Tie them together in a row, side by side, and cover with a long mat. This makes a fairly flat surface. With 18 inches of upholstery beneath the mat, you can kiss bumps and bruises goodbye. What's more, the pupils will actually like the work.

Backward roll

The backward roll with an arch is an exercise requiring skill, and

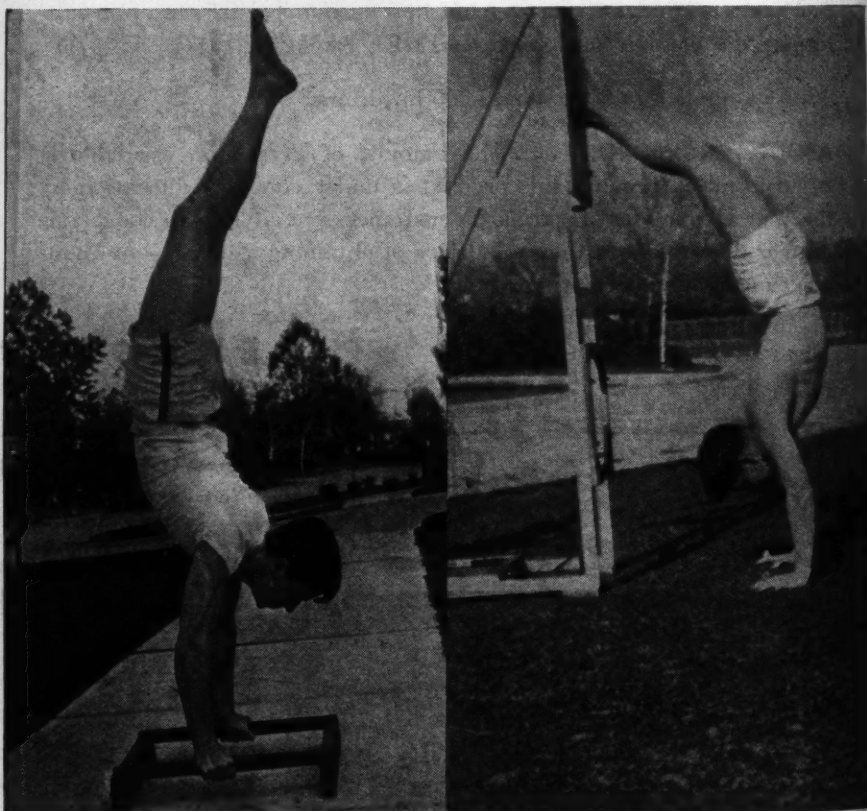
should be taught with the aid of two assistants. Have each grab an ankle as the roller comes over. Stand him up with these instructions: Heels together! Toes together! Point your toes! Arch your back! Knees together! Head up! Look at the ceiling! Snap your feet down!

As these instructions are memorized, the assistants should name only those where improvement is needed. In the inverted position, everything "goes black" for a moment; and the boy hasn't the slightest idea of how his body appears and what corrections are necessary. Consequently, he must be told over and over again what to do.

The next step is the backward roll over a mat-draped horse. To clear this obstacle, the roller must learn to push up to a handstand. Following this is a backward roll so close to a mat-covered wall that the feet must be pushed straight up into a momentary handstand. To return to standing position, the boy should be instructed to step away from the wall with one hand, while half-turning sideways, and then to

(Continued on page 18)

Left: The low-parallel crutch for the handstand. Right: Moving sled, used in learning the handwalk. Handstander maintains contact while a partner slowly moves the sled.

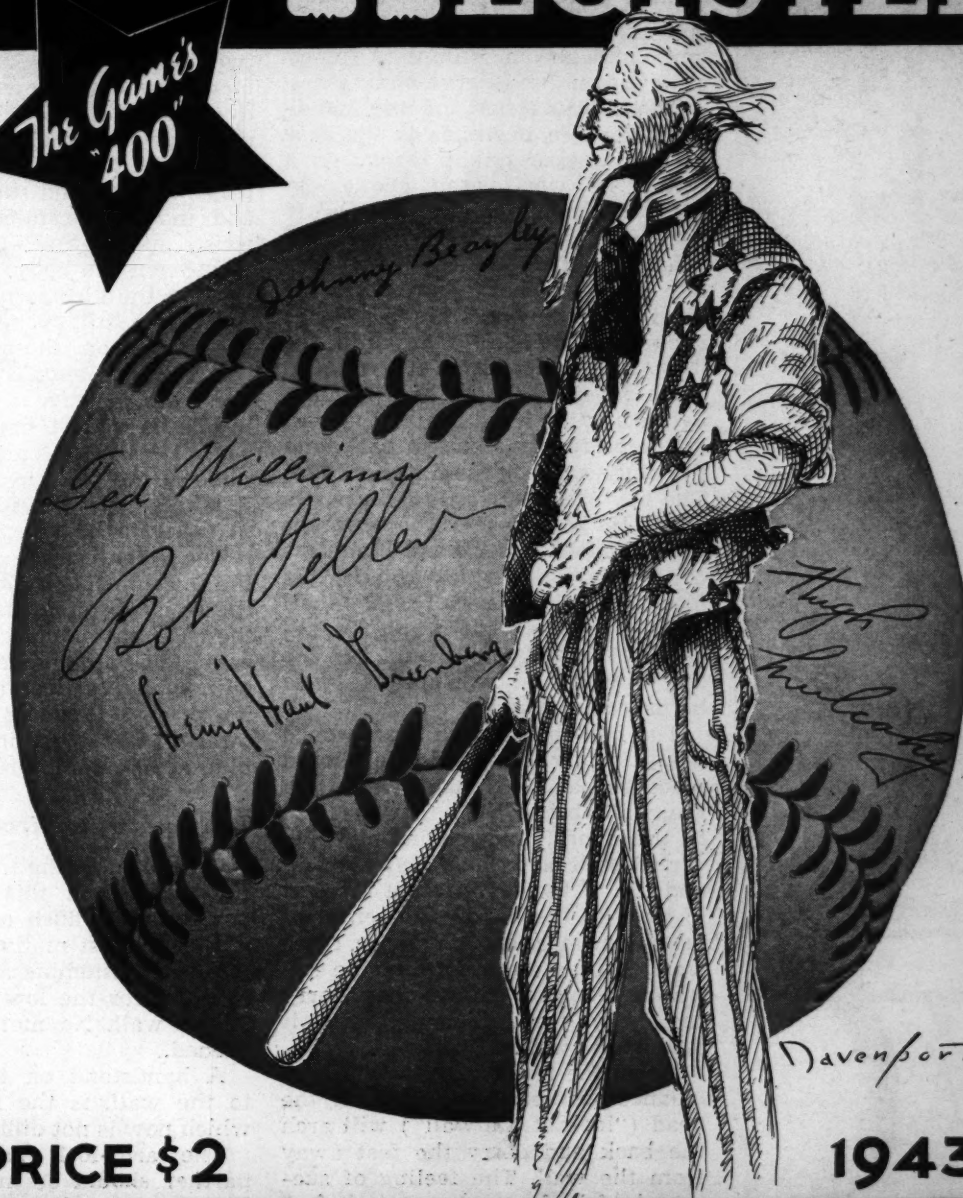




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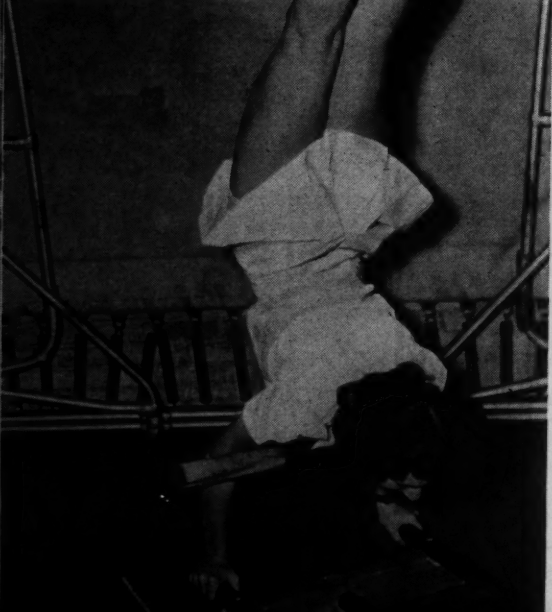
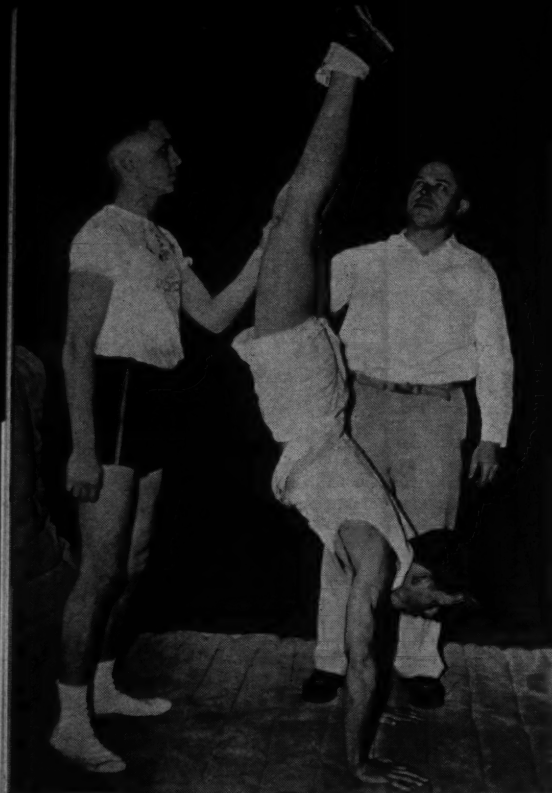
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snap the feet down by a quick flexing of the thighs.

Handstand

Every boy attempts a handstand or handwalk at some time or another, but about one in 500 succeed. The failure is caused by weak arm and shoulder muscles and "uneducated" semilunar canals (the balance wheels in the ears).

The only way to build up the muscles is to use them, and the only way to educate the balance canals is to remain in the inverted position long enough to stimulate many otherwise unused nerve endings.

The difficult part of the handstand for the beginner is the fear of falling over on his back. As a result, he won't arch enough to place his center of gravity directly over his base of support. Instead of wasting his time and energy on useless kick-ups, he should place his hands, with fingers well spread but cupped as though to dig into the floor, about a foot from the wall.

An assistant should help lift him by placing the hand nearer the wall in the performer's belt in back, and the other hand on his thigh in front. The boy can now easily do a handstand. He is so close to the wall that he won't fall forward and bump his head, while the quick contact his feet make with the wall removes all fear of toppling backward. To regain his footing, he should flex his thighs with a quick snap; otherwise he may stub his toes.

The boy should then practice the handstand without aid. He should place his hands about two feet from the wall, bring both feet in close to the hands, then go into the inverted position with an easy kick-up and lift. If the feet are not brought in close to the hands, the center of gravity swings through an arc. More work is thus required, and the extra momentum gained may carry the body through and bump it against the wall.

When the feet touch the wall and balance has been gained, lifting the head ("look at the wall") will arch the back and carry the feet away from the wall. The feeling of success is felt for a moment, before the thighs are flexed and the feet snapped down.

The third step in the use of the wall is to place the hands on the floor a little farther from the wall

each time. When the distance becomes so great that he cannot bring his feet away from the wall without a painful arch in the back, the boy has achieved some success and should move to the low parallels with head rest. This valuable little piece of apparatus can be made in the school shop for less than a dollar.

A two-by-two and a four-by-four, 24 inches long, make good runners, and two-by-two's, three feet long, turned around and bolted shoulder-width apart to the runners, make suitable bars.

For the head rest, upholster a twelve-inch disc of three-fourths inch plywood and erect on the four-by-four, with one and one-fourth-inch pipe flanges, elbows and nipples. The use of this head rest brings into play the neck and shoulder muscles and moves the fulcrum from the wrists about three-fourths of the way down the body.

From the illustration it is obvious that it is still possible to topple backwards on these parallels. So the beginner should start close to the wall, or have a partner stand by. These wooden bars facilitate the control of body balance and take some of the pressure off the wrists. It is this wrist pressure that proves so tiring to beginners.

The second-grade parallels move the fulcrum above the elbows. Since there is tremendous pressure on these forearm muscles, the horizontal pipe nipples should be padded with sponge rubber (if you can get it) or a reasonable substitute, to forestall an epidemic of black and blue spots on the arms.

The greatest motivator

Upon completing his first successful balance on this "crutch," the boy feels the flush of success. This is the greatest motivator known. A few more attempts and the learner is ready for the low parallels close to the wall. No more assistance is needed.

A handstand on the floor, close to the wall, is the next objective, which now is not difficult to achieve.

The arm-lock balance with a partner should be introduced next. The floor man lies flat on his back, with the balancer standing close to his head. The latter places his hands on the floor along his partner's waist, who grabs his upper forearms. This lends support similar to the arm-rest parallels, but is not rigid.

As soon as balance can be maintained, the floor man may slide his hands down the balancer's arms, each time a little lower, until the

Top: Assisting in the backward roll with arch. **Center:** Low parallels with head rest. **Bottom:** Second-grade parallels with padded horizontal pipe nipples which move the fulcrum above the elbows.

(Concluded on page 31)

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Recently the United States Office of Education Committee on Wartime Physical Education for High Schools published the manual "Physical Fitness Through Physical Education." This, as you know, is a guide to high school principals and teachers in planning and executing wartime programs of physical education.

We are pleased and proud to note that Barnes publications occupy a prominent place in the minimum list of source materials suggested by the Committee. On this page we list for you the Barnes publications which the Victory Corps Manual recommends and several other helpful Barnes titles. You will find these books valuable in your work.

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Bulletin of New Books and Catalogue Sent On Request

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THE ART OF BACKING UP THE BASES

By E. J. Lalley

E. J. Lalley, of the Buckley School in New York City, was formerly connected with the physical education departments at New York University and Central High School, Binghamton, N. Y.

BACKING up the bases represents one of the finer points of defensive baseball, to which there is a lot more than appears on the surface. It is not a haphazard proposition, conceived on the spot and executed on a free-lance basis. There is method to it; set, definite patterns covering every situation. That is, when seen in its proper perspective and properly taught.

The thorough-going coach never overlooks a detail that may cost him a game, no matter how trivial it may seem. For example, take a situation with men on first and second and

One way in which this may be done is through the preparation of small "position" charts (see illustrations), indicating the proper strategic deployment in specific situations. The coach may distribute these to each squad member to absorb at his leisure. Complemented with a quick brush-over on the field, they offer a good time-saving device with which to put over the principles.

Another good way to drive this information home, is to illustrate it in the gym during the pre-season indoor drills and on rainy days during the season.

The technique of backing up the bases is not a hit-and-miss affair. The bases must be backed up quickly and with method. The first principle to stress is never to leave a

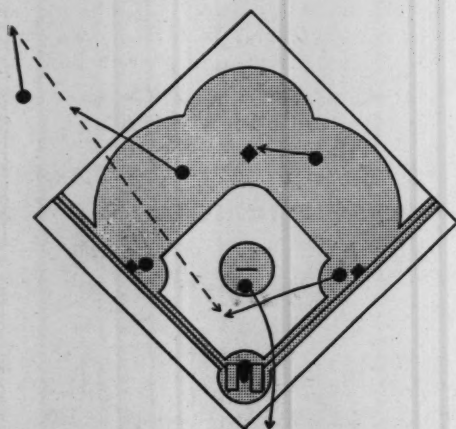
portunity for a putout. The base coach will hold the runner to the bag.

As a rule, however, schoolboy runners are impetuous and base coaches none too alert. Hence, an overthrow that is correctly handled may be converted into a putout by a quick throw to the next base or a snap to the near base to get the man sliding back after a false start.

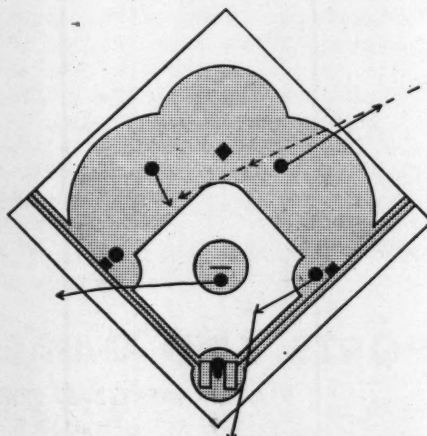
Where an immediate throw is not required, the backer up should hang on to the ball. He may fake a throw and run in with the ball, forcing the runner to stay put.

Following are general backing-up assignments, organized according to position:

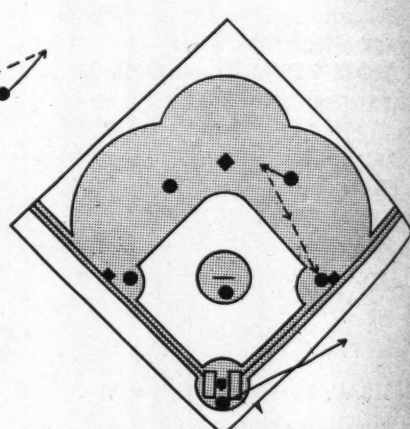
The Pitcher. With none out, back of third on hits that look good for three.



Double to Left, One Man On



Triple to Right



Grounder to Infield

two out. The batter singles and the ball is thrown home. It gets away from the catcher and two men score. Had the pitcher backed up the catcher, only one run would have scored and there would have been a better than even chance to choke off the second run by getting the next man out. How many times does that extra run cost the game?

Vital as backing up the bases is, it seldom receives any emphasis by the coach. Like many defensive fundamentals, it is often completely neglected.

The time element being what it is, the coach can hardly be blamed for skimping on some of the fundamentals. But backing up the bases is a detail that can be covered without taking valuable hours from the regular practice routine.

position if there is a chance for a run-down. Particularly must this be impressed upon the catcher since he is the guardian of the key base. If in doubt about your catcher, instruct him to cover the plate at all times.

The backer up should play at least 25 or 30 feet back of the receiver. In running to this position, he should be careful not to block the receiver's view of the ball. The most common error, however, is getting too close to the receiver.

Low throws that go through the baseman and those deflected by him are the most difficult to handle. The backer up should be on the alert to move quickly either right or left.

He must field the ball cleanly and shift quickly for a possible throw. If the offensive team is being smartly coached, there should be no op-

On hits with a man on first, back of third for a possible play at that bag.

Back of the plate on singles with first and second occupied or on two baggers with a man on first.

Without moving from the vicinity of the mound, the pitcher may back up second on throws from center field.

The pitcher is responsible for covering the plate on a passed ball with a runner on second or third.

The Catcher. (Remember: The catcher should never leave the plate if there is a possibility of a play at home. He is the only player with the armor to block a runner.)

When there are no runners on base, he should run down the base line on grounders to the infield.

A particular play for which he

should watch is that involving the pitcher covering first. The possibility of a collision between runner and pitcher is great, and often results in a wide or missed throw. To get into the correct position the catcher should line up the throw from the first baseman to the pitcher.

First Baseman. Should watch for overthrows of second base from left field.

On long hits, most big league teams usually have the first baseman act as cutoff man.

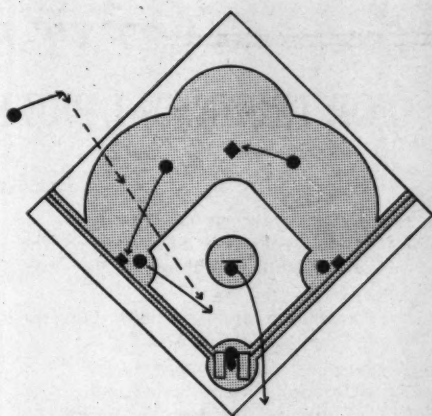
Second Baseman and Shortstop. These two players have an opportunity to display real teamwork in backing each other up on certain throws.

If the shortstop is taking the throw from the catcher on an attempted steal, the second baseman does the backing up. When the latter does the covering, the shortstop moves behind him.

On outfield throws to second from right, the shortstop usually covers the bag. On throws from left, the second baseman usually does the honors.

On throws from center, it is better defensive baseball to have the shortstop take the throw with the second baseman backing up (provided neither has had to go out for the ball).

Both these players are responsi-



Single to Left, Two Men On

ble for covering bad tosses from the catcher to the pitcher. This duty becomes essential with a fast man on third and the score close.

On snap throws to catch a runner taking a long lead, the infielders should work out in advance who should take the throw.

Third Baseman. The only player who should give primary attention to his own position. Most overthrows at other bases will present the possibility of a play at third.

On singles to left or right, with first and second occupied, the shortstop covers third while the third baseman acts as cutoff man in the diamond. As a rule (with men on base), the third baseman should act as cutoff man on all singles.

Third basemen who cover small details will edge over and watch for bad throws from catcher or first baseman to pitcher.

Right Fielder. Protects the territory back of first on throws from the catcher. These throws may result from a play on a bunted ball or on an attempt to pick off a runner.

The right fielder is also in position to cover bad throws by the third baseman which may go over the foul line in his general direction.

Center Fielder. Covers overthrows of second base which come through the middle of the diamond. These throws may develop on an attempted steal, a bunt, or a pickoff play.

Left Fielder. This man has the general assignment of covering any overthrow of third base. Play most apt to occur is a throw by the catcher on a steal or attempted pickoff. Bunted balls fielded by the first baseman, the catcher or the pitcher may call for a force at third or an attempt to tag a runner coming into third, with possible overthrow resulting.

The left fielder is also charged with backing up second on throws from first and second basemen and on those made by right fielder from near the right field foul line. He backs up third on throws from right and center fielders in territory from right center to foul line.



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"Here Below"

(Continued from page 5)

leges will be under contract solely for engineering courses; others under contract for pre-medical or medical instruction, or both.

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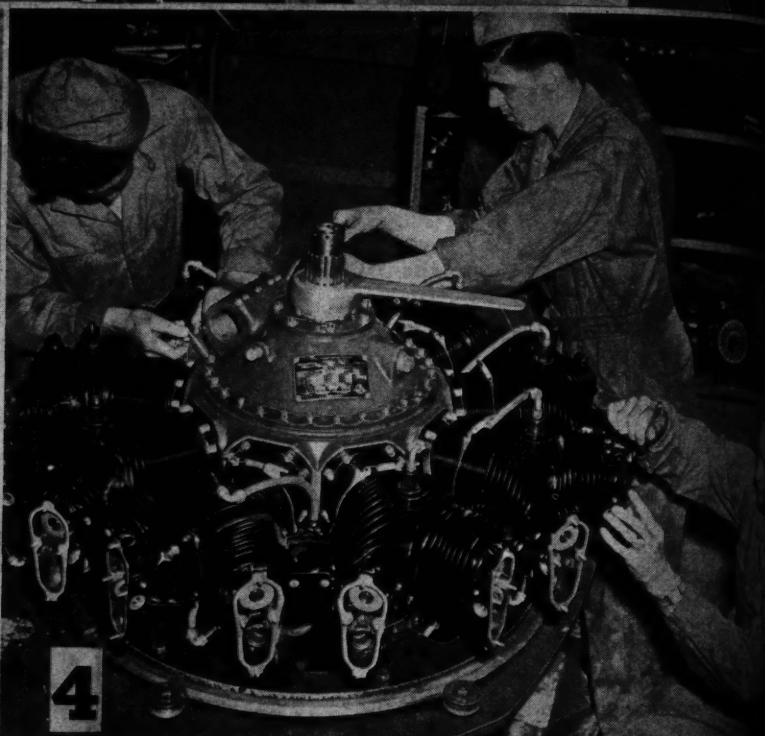
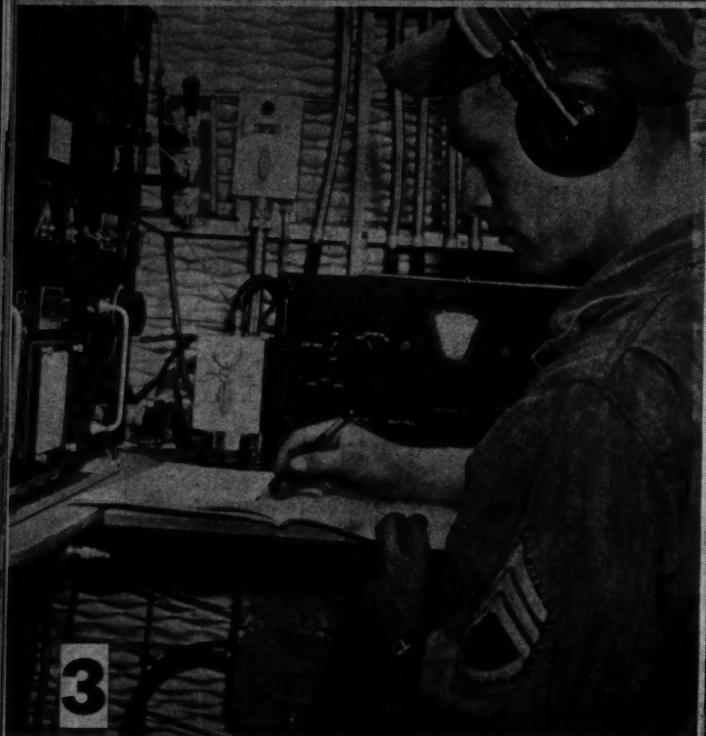
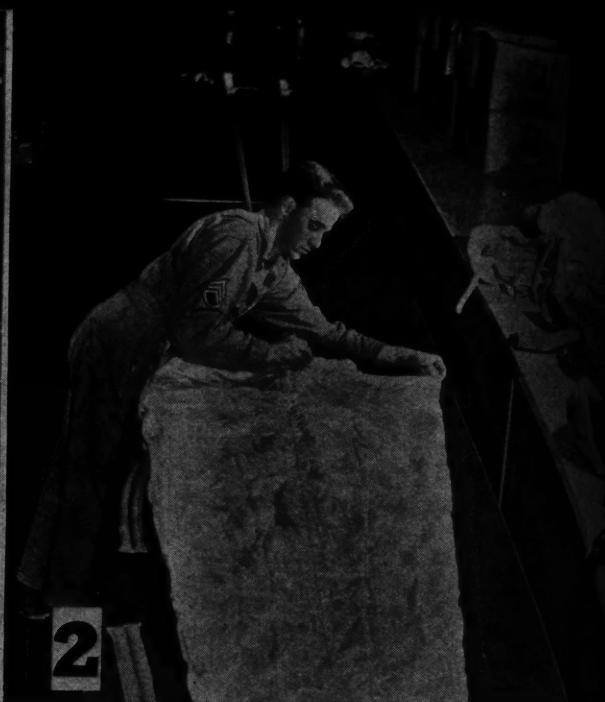
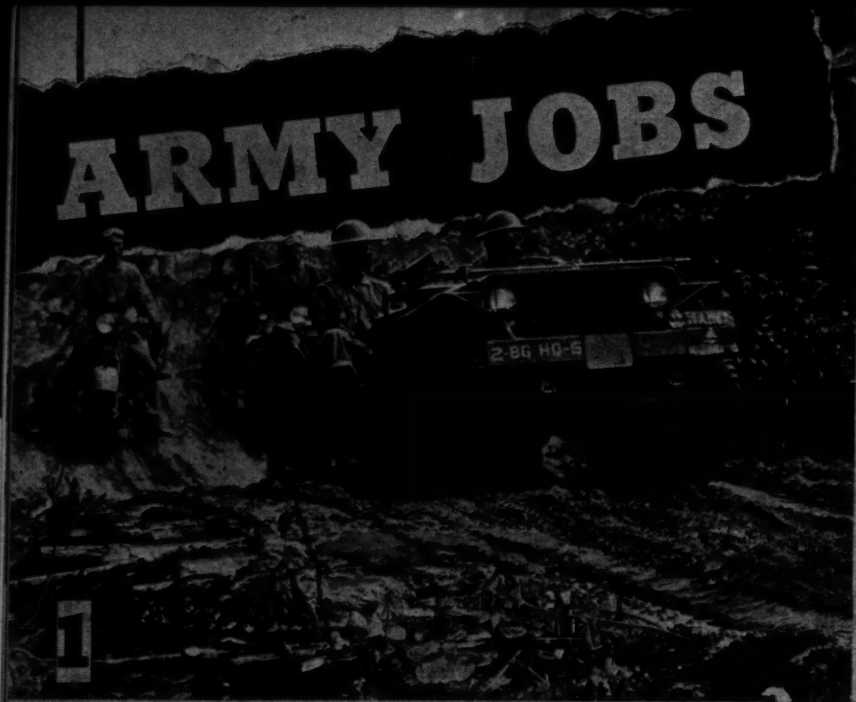
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NO. 2: Packing a parachute is an art and every paratrooper must become an artist before he is given his wings. Parachute Riggers, specialists in packing chutes, are members of every parachute battalion.

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NO. 6: Electrician doing a testing job; he installs, repairs, and tests electric equipment, apparatus, and wiring connected with communication and power systems.

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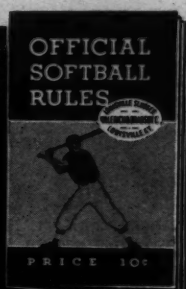


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New Books on the Sport Shelf

HOW TO PREPARE FOR MILITARY FITNESS. By Lt. Col. Francois D'Eliscu. Pp. 216. Illustrated—photographs. New York: W. W. Norton & Co., Inc. \$1.96.

SUPERLATIVE is the word for *How to Prepare*. It is the most thoroughgoing text of its type that has come to our attention. It has everything you can ask for in the way of training suggestions for service in the armed forces; whether that training be conducted on military grounds, civilian fields, or school plants.

Here are the subjects that are covered; all in *complete detail* and illustrated with large, clear-cut pictures.

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4. Tumbling: Rolls, laydowns and dives; stands and balances.
5. Wall scaling and tree climbing; jumping and swinging.
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9. Elementary Judo.
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11. Single and dual stunts—preliminary conditioning for the more vigorous type of activity that is required for combatives.
12. Dual combatives.
13. Rough and tumble games (mass combatives).
14. Aquatic testing, with emphasis on skills necessary to soldiers engaged in a landing operation or river crossing or on board a sinking vessel.
15. Wartime swimming and lifesaving.
16. Appendix of military commands and formations.

This is indeed an ambitious lineup of activities, but the author covers them all simply, clearly and fully. Although they are slanted toward the training of soldiers, they can be easily adapted to any program of physical education and sports.

The author is ideally qualified for the writing of such a book. He is one of the best all-round former college instructors now serving Uncle Sam as a soldier conditioner. His program has been publicized in the news reels and national pictorial periodicals. Even Westbrook Pegler devoted an entire column to the man and his work! No greater endorsement hath been given any man.

PHYSICAL FITNESS WORKBOOK. By Dr. Thomas Kirk Cureton. Pp. 179. Illustrated—photographs, drawings, and tables. Champaign, Ill.: Stipes Publishing Co. \$1.75.

THE learned associate professor of physical education at the University of Illinois prepared this text as a practical workbook for instructors and students taking the Basic Physical Fitness course at Illinois.

It is a voluminous, carefully prepared book which comprehensively covers the subject of physical fitness. After a discussion of the present need of physical preparedness, Dr. Cureton covers: standards, classification in motor fitness, methods for developing fitness, posture, organization for physical fitness, self-rating scales, motor fitness inventory, 17 groups of activities, and endurance.

The book is chock-full of the latest tests and measurements, scientific research and references. It is 11 by 8½ inches, paper-covered, spiral bound, and illustrated with many pictures and tables.

ROUGH AND TUMBLE FIGHTING. By H. E. Kenney. Pp. 48. Illustrated—photographs. Champaign, Ill.: Stipes Publishing Co. \$1.

FROM his vast experience in wrestling, boxing, and kindred sports, the author, who is wrestling coach and assistant professor of physical education at the University of Illinois, has devised a system of all-out personal combat that is proving invaluable in the training and conditioning of soldiers.

Kenney is teaching this system at the University and to the air cadets at nearby Chanute Field.

His system is based on the most effective elements of judo, jiu jitsu, wrestling, boxing, and general rough and tumble tactics; all of which he has astutely analyzed.

In his book, he presents his system in six sections: the art of falling, tactics of offense, counter offenses, disarming technique, prisoner control methods, and fighting tips. He describes the various techniques concisely and well, and illustrates each with photographs. All in all there are 83 illustrations.

The book is 6½ by 8½ inches and paper bound.

High school rules books now available include:

Track and Field Rules. Edited by E. A. Thomas and H. V. Porter. 30c.

Six-Man Football Rules and Handbook. Edited by H. V. Porter and Stephen Epler. 35c.

PHYSIOLOGY OF HEAT EXHAUSTION

By Dr. Laurence E. Morehouse

Dr. Laurence E. Morehouse, formerly of the University of Kansas, is now an officer in the Navy.

HARDLY a rarity, especially in the early season, is the boy who drops out of a strenuous contest, staggers a few feet, falls to his knees, and vomits—a victim of heat exhaustion.

The symptoms of this attack are plain. First the athlete feels weak and dizzy. Then he becomes nauseated, his face turning white and sweating freely. His body feels clammy; he may shiver from cold, even though the temperature is warmer than his body heat, and his pulse is weak and shallow.

Fortunately, however, the athlete often stages a rapid recovery and usually feels ready to resume after a few minutes rest.

It is known that during violent exercise, the body temperature increases from the heat of muscular contraction and the general increase in metabolic processes. The excessive heat thus produced often brings on heat exhaustion which may or may not be accompanied by painful cramps in the muscles of the abdomen or the limbs.

Particularly affected by excessive heat are athletes who are poorly trained or who are suffering from a faulty diet, a lack of a carefully graduated training schedule, or insufficient rest before the contest. Diseased individuals, alcohol addicts, and the very young, very old, and very fat are apt to be more seriously affected by too much heat.

Chief cause

The chief cause of heat exhaustion is a loss of salt from the body. This produces a temporary breakdown of the temperature regulating mechanism. Outside of athletics, unhealthy persons suffer most from heat exhaustion and cramps through exposure to the sun on sultry days, or to indoor heat in foundries, bakeries, boiler and engine rooms.

Post-exercise vomiting from heat exhaustion can be in a measure prevented by helping the temperature regulating mechanism keep the body heat normal, chiefly by sweating. This can be accomplished by drinking an abundance of water, which replaces the salt sweated from the body.

Athletes should drink anywhere up to three quarts of water a day to

fortify the body for the contest. A good idea is to take nearly a quart during the pre-contest meal three hours before the contest and a pint or so about an hour before the contest. Another pint should be taken in time to urinate the excess a few minutes before the event. During the pause between events or at quarters and halves in games, smaller amounts of water can be ingested to slake thirst.

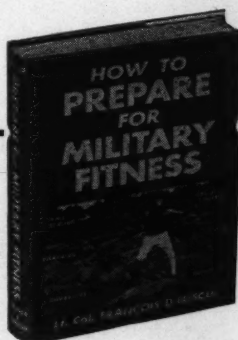
Salt should be taken in ample

quantities with the meals and with the water. Up to a level teaspoonful to a quart of water or a 15 grain tablet with each glassful, depending upon the temperature in which the athlete performs, will suffice.

Less dosages can be given in cooler environments, to athletes who are slender or where practically no clothing is worn. It is especially important to add salt to the inter-contest water refreshments.

The generation of heat in the body during a contest can be further diminished by eating light, easily digestible food in moderate amounts and reducing fats and protein foods

(Concluded on page 31)



The one complete and authoritative book to help you do your war job

HOW TO PREPARE FOR MILITARY FITNESS

By Lt. Col. Francois D'Eliscu

Organizer of Ranger and Combat School,
Ft. George G. Meade, Md.

YOUR war job as a physical educator is to save manpower by reducing the number of 4-Fs and to save training time by conditioning the 1-As before they are inducted. Written from a broad background of practical experience, **HOW TO PREPARE FOR MILITARY FITNESS** is of invaluable assistance in helping you do that important job.

In text and almost 200 pictures this compact and comprehensive manual covers physical testing, calisthenics and conditioning exercises, alertness drills, wall scaling, tumbling, military track, wartime swimming, elementary American judo and other forms of close combat, and disarming. With unusual clarity it explains many new stunts, dual combatives, and rough-and-tumble games that help develop necessary agility and stamina and gives plans for a variety of outdoor and indoor obstacle courses.

This book is the McCoy. It is written by a man who knows your problems through twenty-five years as a coach and teacher and who knows the Army's requirements through active service in this war and the last. He has packed this book full of information you need and have been unable to get hold of elsewhere. There is not a wasted word in it. It is a veritable encyclopedia of physical education in wartime, in one carefully and thoroughly prepared volume. You have a great work to do. **HOW TO PREPARE FOR MILITARY FITNESS** will help you do it easier, better, and quicker. Send for it today.

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Army's Conditioning Program

(Continued from page 7)

best meet the needs of our soldiers. For several reasons it was urged that only the recommended exercises be employed. If the same ones were used repeatedly the men would soon learn them and the time usually expended in explaining new exercises would be saved.

This would also make it possible to go through the entire series of exercises without pause as in Danish gymnastics. Finally the use of the same set of exercises would eliminate an unwise selection by those who were not expert in this field. Each week as the physical condition of the men improves the dosage of each exercise is increased.

Guerrilla Exercises

These movements are designed to prepare and train soldiers for guerrilla warfare. At the same time they provide much vigorous exercise. Examples are bear walk, Indian walk, crouch run, straddle run, bouncing ball, and various carries such as the fireman's carry, cross carry, etc.

Grass Drills

Grass drills have been used for years by football coaches to condition their squads. These exercises develop a considerable degree of muscular endurance and at the same time teach a soldier to fall and rise quickly. It is not essential that grass be available for these exercises.

Combative Events

The purpose of these exercises is to develop aggressiveness, initiative, and resourcefulness, as well as speed and strength. Emphasis is also placed upon certain activities which will develop skills the soldier will use in hand-to-hand combat. The combative events include wrestling on the feet, rooster fight, hand wrestling, Indian wrestling, line wrestling, etc.

Running Exercises

Running is an activity all men may be required to perform when assigned to combat service. It serves to develop muscular and cardio-respiratory endurance that is important in active fighting. The exercises may be performed in three ways:

1. Road or drill field running.
2. Cross-country running.
3. Steeple chase and obstacle-course running.

Swimming, Lifesaving, and Water Safety

To the extent of available facil-

ities, instruction will be given in swimming, lifesaving, and water safety.

In addition to these conditioning exercises, the various Army installations conduct comprehensive competitive sports programs, not as supplementary to, but as an integral part of the total physical fitness program.

Training Circular 87 resulted from a widespread testing program which was introduced last spring. The Special Service Division was requested to conduct this program and Colonel Theodore P. Bank, Chief of Athletic and Recreation Branch, was designated as officer in charge. With the assistance of personnel from the Special Service Division Research Branch and two civilian experts, Dr. C. H. McCloy of the University of Iowa and Dr. A. A. Esslinger of Stanford University, the physical condition of a cross-section of our Ground Forces was tested.

Fitness tests

Twenty-five different physical fitness tests were administered to 400 men and the ten which discriminated best between the fit and unfit individuals were selected for the final test battery. These included:

- | | |
|-------------|-----------------------|
| 1. Pull-Ups | 5. Push-Ups |
| 2. Burpee— | 6. 75-Yd. Pick-a-back |
| 20 s. | 7. Dodging Run |
| 3. Broad | 8. Six-Second Run |
| Jumps | 9. Sit-Ups |
| 4. Shotput | 10. 300-Yd. Run |

This battery was administered to approximately 5,000 troops in eleven different Army camps. All men tested were carefully sampled and represented a true cross-section of the Army insofar as their age, weight, height, nationality, and section of the country from which they came were concerned.

The results revealed conclusively that the men coming into the service today are not physically fit. The lack of strength, endurance, agility, and coordination is shocking. One may well wonder what is being accomplished in our school physical education program. There is ample evidence that the development of strong bodies has not been an important objective in physical education in recent years.

Whatever the cause—lack of adequate facilities or time allotment, "ball-tossing physical educators,"

unsympathetic administrators, or a de-emphasis of the biological values in physical education in favor of the recreational or cultural—the fact is that all branches of our military services have been sadly handicapped in their efforts to prepare men for combat service because of the physical weakness of the incoming men. The Army has found it difficult to do much with bodies which have been neglected for twenty years prior to entrance into the service.

Some physical educators have attempted to explain this situation by claiming “we have been educating for peace rather than war.” The imputation, then, is that strength, endurance, agility, coordination, and balance are not worthy objectives to be pursued in physical education during time of peace. As events during the past two years have demonstrated, it is not possible to build up over night a nation of strong, rugged, vigorous people. The tragic experience of France is ample evidence of this fact.

Before the program now incorporated in Training Circular 87 was officially adopted, a study was undertaken to determine its effectiveness in conditioning troops. This study was carefully controlled and it proved conclusively the value of the new program. Over a six-week period, the troops using this program (which, as indicated above, is very similar to that in the Victory Corps Manual) improved approximately 30 percent in pull-up strength, 50 percent in push-up and abdominal strength, 8 percent in cardio-respiratory endurance and 11 percent in muscular endurance. This represents a very strong endorsement for the Victory Corps program for boys.

Because athletics have so many values to the soldier, they are always stressed to a considerable extent in the Army. In addition to the recreational value of a good athletic program, it also builds up the morale and physique of the soldier, and develops an aggressive, fighting spirit and the ability to think and act quickly and effectively under fire.

Soldiers have leisure—they must have if they are to continue to be effective. A soldier, just as a civilian, may use this leisure advantageously or disadvantageously. Insofar as the Army is concerned, athletics are one of the most valuable types of leisure-time activity. Every effort is made to encourage participation by all men. “Athletics

for All” is our goal, which is probably realized more fully in the Army than in our schools.

Because of all these contributions of athletics to the soldier, the Army has spent millions of dollars in providing athletic equipment and facilities for the troops. Since athletics for all is the goal, all sports are included. Programs in all posts and camps include baseball, softball, boxing, volleyball, basketball and table tennis.

In addition, many camps have organized competition in handball, wrestling, badminton, touch football, tennis and golf. Track meets

and swimming meets are also being conducted in some camps. As soon as existing facilities are improved it is planned to have all of these activities in every camp, and many others such as archery, darts, handball, speedball and soccer.

Every company that goes overseas carries two athletic kits. It has boxing equipment, footballs, basketballs, soccerballs; in fact every type of game equipment we can possibly furnish. In addition, we have activated Special Service units comprised of five officers and 118 enlisted men, all of whom are special-

(Concluded on following page)

TODAY'S PROGRAMS FOR OUTDOOR ACTIVITIES . . .

Call For Firm, Dust-Free Surfaces

This can be done—even in the face of shortages of equipment and reduced manpower, by simply applying flake Solvay Calcium Chloride.

This material, which can be used on cinders, clay, graystone, earth, gravel, compacts the surface and **completely ends dust**. It is easy to use, is odorless, harmless, colorless, does not track or stain, reduces sunglare.

It has been used for 25 years by leading schools and universities, and is today being used on R.O.T.C. drill grounds and other military reservations, tennis courts, athletic grounds, walks, roads, and parking areas. Write for the folder, “For Cleaner, Weedless, Dust-free Play Areas.” Use this coupon today:

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Gentlemen: Kindly send me a free copy of your folder “For Cleaner, Weedless, Dust-free Play Areas.”

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Announcing



1943

SCHOLASTIC

TENNIS TOURNAMENTS

(All Intramural)

- Open to all high schools—no entry fees
- Awards to boy and girl winners in each school

THE National Scholastic Tennis Tournament is open to all high schools and junior high schools in the United States. There is no entry fee, nor any red tape attached to entering.

Application may be made by checking "Tennis Tournament Entry" in the coupon on page 32.

The National Scholastic Tennis Tournament is strictly intramural and is designed to encourage the playing of tennis on the part of the student body as a whole.

**enter your
school now**

Each school has complete control over its own tournaments, and may hold them any time before the end of the term.

A handsome parchment scroll, suitably inscribed, will be presented to the winners of both the boy and girl tournament in each school. Free draw charts will be furnished to every school holding a tournament.

When applying for entry to the tournament, specify whether there will be a tournament for boys only, girls only, or a boys' and a girls' tournament.

This tournament plan is another of the services rendered high schools by

Scholastic Publications

SCHOLASTIC ● SCHOLASTIC COACH
220 East 42nd Street New York, N. Y.

(Continued from page 29)

ists; so many in athletics, so many in theatricals, music, etc. They are trained in the United States and then go overseas.

One or two of these units are assigned to a task force. They carry with them a great deal of athletic equipment, musical instruments, moving picture films—everything we can provide in the line of recreation. These units service the troops overseas as they come back from combat or outpost duty to a reserve area. They cover hundreds of miles; they are organized to give practically any type of recreation program which the troops may desire.

Emphasis on intramurals

The great emphasis in the Army is upon intramural competition. It is recommended that competition begin on an intersquad or inter-platoon basis. From such tournaments company teams may be selected and, in turn, battalion, regimental, and divisional teams. Camp or post teams to compete with other civilian and military teams are encouraged. In no sense do these highly specialized teams bring about a reduction in emphasis on the smaller unit teams.

Each camp, post or station has a Special Services officer who is charged with the responsibility of organizing and conducting the athletic program. Each division or separate unit within the camp also has a full-time Special Services officer. Several months ago authorization was obtained for full-time regimental Special Service Officers. All of these officers undergo a six-week training course at the Special Services School at Washington and Lee University, Lexington, Va. Many of these officers have physical education or coaching training and experience.

For their assistance, the Special Services Branch has published a technical manual (*Sports and Games* TM 21-220) of 17 sports and games. This manual deals with the field and court construction, the rules, and coaching and playing techniques of the various sports. In addition, there is a manual (*Regimental Recreation Officer's Guide*) covering the field of athletic and recreation duties of regimental recreation officers.

Funds for the purchase of athletic and recreational equipment are allotted by the Special Services Branch to each service command and are in turn sub-allotted to lower units.

Gymnastics and Tumbling

(Continued from page 18)

balance can be maintained with a wrist grip.

For the next exercise, have the partner sit erect, hands locked behind his neck. Now have the balancer do his handstand on the sitter's shoulders, so that the latter's forearms lend support to the balancer's forearms.

After the handstand comes the handwalk, a maneuver that is often necessary while holding a balance on the horse or parallel bars, or in pyramid work. To accelerate the learning process, a sled (something like the football machine) proves helpful.

It can be made of one-by-two's or half-inch pipe, high instead of wide, with netting across the top for a toe rest. After the boy has maintained his balance for a few seconds, an assistant may slowly move the sled; the learner walking along with him.

By keeping his toes in contact with the netting, the boy need have no fear of falling over on his back. He is thus able to maintain the inverted position long enough to learn the exact feel of the required arch and the necessary contraction of many muscles. At the same time, the semilunar canals are educated for their part in this new position.

Where swimming pools are available, the handwalk is easy to learn. The boy may practice in a section of the pool where the water is waist deep.

Heat Exhaustion

(Continued from page 27)

in the diet. Fruit juices are especially good and should replace tea and coffee in hot weather. Alcoholic drinks must be avoided.

Hot weather competition should mean shorter periods of participation and more frequent and prolonged rest periods. Exposure to the direct rays of the sun, especially of the head, must be avoided by wearing sufficient covering.

The athlete who is suffering from heat exhaustion should be kept warm and carried, in a lying position, to circulating air. Here an ammonia inhalant may be administered. He can then be given up to a tablespoon of salt, small amounts at a time, with small drinks of water at frequent intervals. If the dizziness and weakness persist, a physician should be called.

*For SOFTER... SAFER...
SPRINGIER GYM MATS*

DEMAND MATS FILLED WITH GENUINE

OZITE

GYMNASIUM MAT FELT



● If you want gym mats that will stay softer, safer, springier . . . years longer . . . be sure to specify fillers of Genuine OZITE Gymnasium Mat Felt. It's ALL-HAIR . . . that's why it will stay thick and resilient even under hardest use in today's stepped-up training programs. Actually outlasts covers and can be used again and again. OZITE is safer because it's felted without needles by OZITE Platen Process . . . no chance of injury from broken points or metal bits. OZITE is heavier and denser than ordinary fillers, and its laminated construction permanently assures a flat, bumpless lie.

AMERICAN HAIR & FELT COMPANY
Merchandise Mart • Chicago

This OZITE label sewn on the cover of gym mats protects you against substitution . . . shows that the filler is OZITE Gymnasium Mat Felt.

WRITE FOR NAMES OF CONCERNS WHO CAN SUPPLY YOU WITH OZITE-FILLED MATS!

MASTER COUPON

After checking carefully items desired, this coupon may be sent directly to Scholastic Coach advertising department, 220 East 42nd Street, New York, N. Y., from which point the advertiser will be notified of the request.

ALCOHOL EDUCATION

- ☐ Glenn Cunningham Poster
☐ Bob Kiphuth Poster How Many?

AMERICAN HAIR & FELT (31)

- ☐ Information on Gym Mats

A. S. BARNES (19)

- ☐ Sports Books Catalog

BIKE WEB (6)

- ☐ Information on Athletic Supporters

BOOKS FOR PRE-INDUCTION TRAINING (22)

- Electricity 1 2 3 4 5 6 7 8
9 10 11 12
Shopwork 1 2 3
Math 1 2 3 4 5

Machines 1 2 3 4 5

- Radio, Physics 1 2 3 4 5 6 7
(Numbers refer to books, circle those you desire information on.)

CEDAR KRAFT (28)

- ☐ Information, Score Boards

DENVER CHEMICAL (21)

- ☐ Handbook, "Athletic Injuries"

EAGLE METALART (28)

- ☐ Catalog on Trophies, Medals, etc.

FULD BROS. (23)

- ☐ Sample, "Anti-fect" (for Athlete's Foot)

HAND KNIT HOSIERY (26)

- ☐ Catalog on Award Sweaters
☐ Information on Athletic Socks

HILLERICH & BRADSBY (25)

- ☐ Official Softball Rules Book
☐ 1943 Famous Slugger Year Book

HUNTINGTON LABS. (3)

- ☐ New Basketball Coaches Digest

RICHARD M. JOHNSON (23)

- ☐ Individual Embroidered Name Plate

JOHNSON & JOHNSON (22)

- ☐ Information on free film, "Help Wanted"

(Numbers in parentheses denote page on which advertisement may be found)

ON PAGE 32 ARE OTHER LISTINGS AND FORM FOR SIGNATURE

Will Sports Shoes Be Rationed?

SINCE the advent of shoe rationing, school coaches have been wondering whether the law embraces athletic footwear. They want to know if certificates will have to be presented with every school shoe purchase. Will the sport shoe count against the boy's over-all allowance? What will be the procedure for making purchases?

To clarify this situation, *Scholastic Coach* appealed to the Office of Price Administration for a directive. The OPA complied, and the interpretations that are given herewith may be accepted as official.

The OPA directive definitely stated that certain types of athletic shoes are exempt from ration control. These include: ski shoes, skate shoes, and shoes with fabric uppers and rubber soles which are completed, packaged and shipped from the factory before April 16.

In short, you may equip your teams with basketball or gym shoes as usual, provided the uppers are made of fabric (not leather). This is a rosy picture. But there is a hitch. You can purchase these shoes *provided you can get them*. Manufacture of this type shoe ceased last fall. Consequently the dealers can

only supply you with what shoes they have left on their shelves.

Insofar as *individual purchases* go, football, baseball and track shoes fall under ration control, since they have leather uppers. Any individual customer must surrender a shoe stamp or certificate. This holds true whether the shoes are to be used for gym work or for intramurals.

However, the regulations do provide that an institution which *furnishes* (not sells) shoes to its students may do so without the students having to surrender shoe stamps. Institutions which *sell* shoes to students must collect a shoe stamp for each sale of a rationed-type shoe.

Any institution which does furnish athletic shoes to its students without cost, may obtain certificates for the purchase of such shoes by applying to the District office for its area.

Summing up, then, if your school furnishes shoes to the boys, they do not have to give up shoe stamps. If, however, they must buy their own shoes, even if it is through the school, they must use a stamp or certificate.

NEW EQUIPMENT

Victory Lockers

Designed and built for speed and economy, the Curtis Co. Inc.'s new wood Victory locker offers the perfect solution to your locker problems. It is light, durable and makes no use of critical materials. Design and size are standardized. With legs, it is 15 in. wide, 18 in. deep and 65 in. high. Without legs, it is 5 in. lower. All parts are pre-fit for quick, easy installation. Available in individual units or in batteries of any desired number. Each locker consists of paneled ends, back panel, front panel including door, bottom, shelf, hat shelf, top, and divider partition. Made of wood, painted olive drab.

Non-Elastic Supporters



Patent No. 2,301,068

Now that our intensified physical education and sports programs are stressing all the rough and tough conditions, every boy needs a supporter that new non-elastic supporter does precisely this. It contains no elastic yet provides all the required support with no loss in the quality you have a right to expect in an athletic supporter. Comes in three sizes—small, medium and large. Can be laundered and will wear indefinitely.

First Aid Chart

Johnson & Johnson is distributing an unusually excellent 30 by 21 in. first-aid chart suitable for bulletin board or wall display. Every department of physical education can use it to advantage. The chart contains complete instructions for: shock, bleeding, asphyxia, insensibility, fractures (broken bones), wound dressing hints, poisoned wounds, foreign bodies, injuries caused by heat and cold, first-aid bandaging, sprains, strains, and poisons. Also included are exceptionally helpful general principles and suggested first-aid until the doctor arrives. The chart is neatly organized and nicely illustrated. For each copy send 10c to Johnson & Johnson, Dept. 54, New Brunswick, N. J.

"Help Wanted" (Film)

Another excellent free service by Johnson & Johnson is the three-reel first-aid film, *Help Wanted*, which shows the basic principles of first aid and the general procedures in caring for victims before the doctor arrives. It is intended for supplementary use with first-aid courses, and includes closeups of shock treatment, bandaging, treatment of burns, artificial respiration, treatment of fractures, and methods of transporting the injured. It is available without charge, except return transportation costs. Write Johnson & Johnson at aforementioned address.

Locker Poster

Now that new steel lockers are no longer available and repair parts difficult to obtain, the steel lockers you have must be maintained for the war's duration. Responsibility for the proper use and care of this equipment rests mainly with its users. Through their observance of common-sense rules, locker damage will be avoided and locker room safety promoted. To impress them with their responsibility, the Penn Metal Corp. is distributing a large, attractive var-hued poster for locker room display. On this are listed the fundamental safety measures. For your copy write the Penn Metal Corp., Oregon Ave. and Swanson St., Philadelphia, Pa.

For further information on these items, check Master Coupon under "New Equipment."

SCHOLASTIC COACH MASTER COUPON

(See page 31 for other listings)

(Numbers in parentheses denote page on which advertisement may be found)

KAHNFAST ATHLETIC FABRICS (2)

- ☐ Swatches, Twill-Satins

LINEN THREAD

(Inside Front Cover)

- ☐ Catalog on Sports Nets

NEW EQUIPMENT (32)

- ☐ Non-Elastic Supporter
☐ Wood Lockers
☐ Locker Room Poster

W. W. NORTON (27)

- ☐ Exam copy of "How to Prepare for Military Fitness" (Five Days)

O'SHEA KNITTING (4)

- ☐ Catalog on Athletic Wear

PENNA SALT (15)

- ☐ Sample, "Tilite"

PETERSEN & CO. (23)

- ☐ Catalog on Gym Mats, Football Dummies, Wrestling Mats

JOHN T. RIDDELL

(See third cover)

- ☐ Information on Athletic Footwear

SOLVAY SALES (29)

- ☐ Folder, "For Cleaner, Weedless, Dust-free Play Areas"

A. G. SPALDING (1)

- ☐ Baseball Catalog

TENNIS TOURNAMENT (30)

- ☐ Boys' Singles
☐ Girls' Singles
☐ Doubles

U. S. RUBBER (13)

- ☐ "Physical Fitness" Bulletin
How Many for Staff and Student Leaders?
(Quantity Limited)

VOIT RUBBER CO. (23)

- ☐ Catalog on Rubber Balls
☐ Price list of available Rubber-Covered Athletic Equipment

Has your school a High School Victory Corps.....

NAME..... POSITION.....
(Principal, coach, athletic director, physical director)

SCHOOL..... ENROLLMENT.....

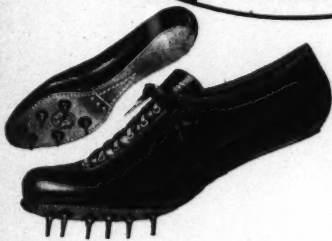
CITY..... STATE.....

No coupon honored unless position is stated

March, 1943

SHOES

for Military Track



Style S—Our finest model University shoe. A light, but very durable, glove-fitting yellowback Kangaroo sprint shoe. Hand-turned construction \$7.00



Style NX—A track shoe long needed to meet the demand for a more durable practice shoe. It is of genuine Goodyear welt construction. Has full sole which keeps upper from wearing out at heel. We believe this is the toughest track shoe made. . . . \$5.00



Style N—A hand turned shoe made of very fine grade of Athletic Tan leather. Fits like a glove. . . . \$5.75

for Baseball and Softball . . .



Style NB—A very fine Goodyear welt construction baseball shoe with split shank sole. Made of Ath-Tan Kangaroo. Used by many professionals. . . \$5.75



RIDDELL
"The House of
Quality and Service"



Style KB—Goodyear welt construction with straight sole. An extremely strong shoe. Upper made of the finest Athletic Tan leather. Used by quite a few Big League catchers and pitchers. Best shoe in our line for this purpose. . . . \$5.00

John T. Riddell 1259 N. Wood St., Chicago, Ill.